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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/684,867 | 10/14/2003 | Frederic Guerin | PO-7962/PS-1127 | 4807 |

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| EXAMINER |
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RONESI, VICKEY M

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| ART UNIT | PAPER NUMBER |
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1714

DATE MAILED: 02/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/684,867

Applicant(s)

GUERIN, FREDERIC

Examiner

Vickey Ronesi

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/14/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification does not disclose the use of a “resin or sulfur curing system” as claimed in present claim 4.

Claim Objections

2. Claims 2-4 are objected to because the term “polymer composite” on line 1 of each claim has antecedent basis in claim 1 and should therefore read as “The polymer composite.”

Claim 5 is objected to because the term “polymer composition” on line 1 of the claim has antecedent basis in claim 1 and should therefore read as “the polymer composite.”

Claim 7 is objected to because the word “process” on line 1 of the claim has antecedent basis in claim 6 and should therefore read as “The process.”

Claim 9 is objected to because the word “process” on line 1 of the claim has antecedent basis in claim 8 and should therefore read as “The process.”

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "peroxide, resin or sulfur curing system" causes confusion since it can be interpreted in two ways. If read as meaning as three separate curing systems such as a peroxide curing system, a resin curing system, or a sulfur curing system, it is not understood what is meant by a "resin curing system." Moreover, the claim may be read as the composite further comprising any one of a peroxide, an additional resin or a sulfur curing system.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5 rejected under 35 U.S.C. 102(b) as being anticipated by Fujii (WO 97/36956).

It is noted that the international Patent Application WO publication is being utilized for date purposes. However, since WO 97/36956 is in Japanese, in the discussion below, the US equivalent for WO 97/36956, namely US 6,489,385, is referred to in the body of the rejection below. All column and line citations are to the US equivalent.

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Fujii discloses a composition comprising a nitrile group-containing nitrile rubber (col. 2, line 35 to col. 3, line 10) having a Mooney viscosity ranging from 5 to 135 (col. 2, lines 1-2) and various other components such as a vulcanizing agents (col. 6, line 61 to col. 7, line 37), fillers (col. 6, lines 52-58), and fibers (col. 11, lines 34-54). The composition is combined to form composites (col. 29, lines 34-36).

In light of the above, it is clear that Fujii anticipates the presently cited claims.

5. Claims 1-2, 4, and 5 rejected under 35 U.S.C. 102(b) as being anticipated by Musch (US 5,187,232).

Musch discloses a vulcanizates comprising hydrogenated nitrile rubbers having a Mooney viscosity ranging from 10-150 (col. 2, lines 45-47); vulcanizing systems such as those based on sulfur or peroxides (col. 2, line 66 to col. 3, line 44); and fillers (col. 2, lines 54-56; col. 4, line 46 to col. 5, line 25). The vulcanizates are prepared by mixing (col. 2, lines 48-50).

In light of the above, it is clear that Musch anticipates the presently cited claims.

6. Claims 1-2, 4, and 5 rejected under 35 U.S.C. 102(b) as being anticipated by Aonuma (US 5,432,226).

Aonuma discloses a rubber formulation that is injected molded (col. 8, line 20) to form articles such as those disclosed on col. 8, lines 48-60 comprising a hydrogenated nitrile rubber having a Mooney viscosity of up to 70; filler; and a peroxide crosslinking agent (col. 16, line 54 to col. 17, line 14). Note col. 9, line 13 where a hydrogenated nitrile rubber having a Mooney viscosity of 25 at 100°C is exemplified.

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In light of the above, it is clear that Aonuma anticipates the presently cited claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii (WO 97/36956) in view of Graefe (US 5,002,475).

The discussion with respect to Fujii in paragraph 4 above is incorporated here by reference.

Fujii does not disclose that an injection molding process is utilized, nevertheless, it discloses that the composition is useful in making belts (col. 11, lines 52-53; col. 29, lines 44-46).

Graefe discloses a reaction (i.e., liquid) injection molding (RIM) apparatus and teaches that RIM apparatus and processes are very useful in manufacturing shaped articles from thermosetting resins such as transmission belts and conveyor belts (col. 1, lines 37-48).

Given that Fujii discloses that its composition is suitable for articles such as belts and given the teachings by Graefe regarding the usefulness of RIM to form belts from thermosetting resins, it would have been obvious to one of ordinary skill in the art to utilize RIM processes to form a belt utilizing Fujii's composition and thereby arrive at the presently cited claims.

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8. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Musch (US 5,187,232) in view of Graefe (US 5,002,475).

The discussion with respect to Musch in paragraph 5 above is incorporated here by reference.

Musch does not disclose that an injecting molding process is utilized, nevertheless, it does disclose that composition is useful in making seals, hoses, membranes, drive belts, gasket, cable sheaths, etc. (col. 3, lines 62-66).

Graefe discloses a reaction (i.e., liquid) injection molding (RIM) apparatus and teaches that RIM apparatus and processes are very useful in manufacturing shaped articles from thermosetting resins such as gaskets, power transmission belts, conveyor belts, and the like (col. 1, lines 37-48).

Given that Musch discloses that its composition is suitable for articles such as seals, hoses, belts, etc. and given the teachings by Graefe regarding the usefulness of RIM to form those articles from thermosetting resins, it would have been obvious to one of ordinary skill in the art to utilize RIM processes to form those articles utilizing Musch's composition and thereby arrive at the presently cited claims.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Two obviousness-type double patenting rejections are set forth below.

Double Patenting, I

9. Claims 1-9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-14, 16, and 7 of copending Application No. 10/728,029. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons given below.

US Appl. '029 discloses a composite and a process for the manufacture of a shaped article wherein the Mooney viscosity from 30-50. Although the Mooney viscosities of US Appl. '029 do not overlap the presently claimed range of below 30, it is the examiner's position that the values are close enough that one of ordinary skill in the art would have expected the same properties. Case law holds that a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). Should applicant argue criticality of Mooney viscosity less than 30, it will be noted that applicants' data in Table 3 on page 20 compares polymers of Mooney viscosity 6.5 and Mooney viscosity 70. Since 70 is very distant from US '029's 30, such comparative data has little or no probative value.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 1-9 are directed to an invention not patentably distinct from claims 12-14, 16, and 17 of commonly assigned copending Application No. 10/728,029. Specifically, see the discussion set forth in paragraph 9 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302).

Commonly assigned copending Application No. 10/728,029, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Double Patenting, II

11. Claims 1-9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of copending

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Application No.10/684,601. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons given below.

US Appl. '601 discloses a composite and a process for the manufacture of a shaped article wherein the Mooney viscosity from 30-50. Although the Mooney viscosities of US Appl. '601 do not overlap the presently claimed range of below 30, it is the examiner's position that the values are close enough that one of ordinary skill in the art would have expected the same properties. Case law holds that a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). Should applicant argue criticality of Mooney viscosity less than 30, it will be noted that applicants' data in Table 3 on page 20 compares polymers of Mooney viscosity 6.5 and Mooney viscosity 70. Since 70 is very distant from US '029's 30, such comparative data has little or no probative value.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 1-9 are directed to an invention not patentably distinct from claims 1-7 of commonly assigned Application No.10/684,601. Specifically, see the discussion set forth in paragraph 11 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302).

Commonly assigned Application No.10/684,601, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as

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prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Correspondence

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

1/28/2005

vr



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